

## CLAIM REVISIONS

- 2 1. (previously presented) A light source (1) comprising  
3 – a discharge vessel (2) which is filled with a filling gas,  
4 – an electron beam source (4) arranged in vacuum or in a region of low pressure, which  
5 source (4) generates electrons (12) and propels them through an inlet foil (8) into the  
6 discharge vessel (2),  
7 characterized in that the inlet foil (8) comprises a diamond layer.

2. (previously presented) A light source as claimed in claim 1, characterized in that the diamond layer has a thickness below 100  $\mu\text{m}$ .

3. (previously presented) A light source as claimed in claim 1, characterized in that the diamond layer has a frame (7).

4. (previously presented) A light source as claimed in claim 1, characterized in that the diamond layer has a metal brazing layer.

5. (previously presented) A light source as claimed in claim 1, characterized in that the diamond layer has an organic adhesion layer.

6. (original) A light source as claimed in claim 1, characterized in that the electron beam source comprises a thermionic electron emitter.

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7. (original) A light source as claimed in claim 1, characterized in that the electron beam source comprises a field emitter.

1 8. (original) A method of manufacturing a foil (8) for a light source (1), characterized by  
2 the following process steps:

- 3 - carbon atoms are deposited on a substrate (7) so as to form a diamond foil (8), and
- 4 - a portion of the substrate is etched away such that a remaining portion (7) of the
- 5 substrate forms a frame (7) for the diamond foil (8).

1 9. (original) A method of manufacturing a foil (8) for a light source (1), characterized by  
2 the following process steps:

- 3 - carbon atoms are deposited on a substrate so as to form a diamond foil (8),
- 4 - the diamond foil (8) is removed from the substrate, and
- 5 - the diamond foil (8) is brazed to a frame (7).

1 10. (original) A method of manufacturing a foil (8) for a light source (1), characterized by  
2 the following process steps:

- 3 - carbon atoms are deposited on a substrate so as to form a diamond foil (8),
- 4 - the diamond foil (8) is removed from the substrate (7), and
- 5 - the diamond foil (8) is adhered to a frame (7).

1 11. (previously presented) A gas discharge lamp (1) comprising

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- 2    – a discharge vessel (2) which is filled with a filling gas, which vessel is adapted to produce
- 3        non-coherent visible light from at least one wall in response to received radiation
- 4        produced by the gas;
- 5    – an inlet foil comprising a diamond layer;
- 6    – an electron beam source (4) arranged in vacuum or in a region of low pressure, which
- 7        source (4) generates electrons (12) and propels them through the inlet foil (8) into the
- 8        discharge vessel (2), causing the gas to produce the radiation.

1    12. (previously presented) A method of manufacturing a light source, comprising, not  
2    necessarily in the following order:

- 3    – providing
- 4        • a discharge vessel (2) which is filled with a filling gas, which vessel is adapted to
- 5        produce non-coherent visible light from at least one wall in response to received
- 6        radiation produced by the gas
- 7        • an electron beam source (4) arranged in vacuum or in a region of low pressure,
- 8        which source (4) generates electrons (12) and propels them into the discharge vessel
- 9        (2), causing the gas to produce the radiation;
- 10   – inserting an inlet foil between the source and the vessel, which inlet foil comprises a
- 11        diamond layer.

13. (previously presented) The method of claim 12, wherein the light source is a gas  
discharge lamp.

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14. (previously presented) The light source of claim 2, wherein the diamond layer has a thickness below 50 $\mu$ m.

15. (previously presented) The light source of claim 2, wherein the diamond layer has a thickness below 20 $\mu$ m.

16. (new) The light source of claim 7, wherein the field emitter comprises carbon nanotubes for widening the electron beam.